

## PATENT COOPERATION TREATY

PCT/JP2003/016642



Translation

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference KP107	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/016642	International filing date (day/month/year) 24 December 2003 (24.12.2003)	Priority date (day/month/year) 26 December 2002 (26.12.2002)
International Patent Classification (IPC) or national classification and IPC C08L 67/04		
Applicant MITSUBISHI PLASTICS, INC.		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand 16 April 2004 (16.04.2004)	Date of completion of this report 11 August 2004 (11.08.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/016642

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03/16642

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)

Claims

1-5

YES

Claims

NO

Inventive step (IS)

Claims

2-5

YES

Claim

1

NO

Industrial applicability (IA)

Claims

1-5

YES

Claims

NO

## 2. Citations and explanations (Rule 70.7)

Document 1: JP, 2002-155197, A (Unitika Ltd.),  
28 May, 2002.

## Claim 1

The invention of claim 1 does not appear to involve an inventive step based on document 1 cited in the ISR.

Conducting comparative examination of the mixing ratio of high-crystallinity polylactic acid and low-crystallinity polylactic acid contained in the resin composition described in document 1 and setting the mixing ratio of the high-crystallinity polylactic acid at 50 wt.% or more based on the mixture of the high-crystallinity polylactic acid and low-crystallinity polylactic acid could have been easily implemented by a person skilled in the art.

## Claims 2 to 4

The inventions of claims 2 to 4 appear to involve an inventive step with respect to document 1 cited in the ISR.

Document 1 does not describe that a polylactic acid polymer sheet for hot molding is a sheet using a resin composition composed of a non-crystalline polylactic acid polymer with a content ratio of L-lactic acid and D-lactic acid of 92: 8 to 8 :92 and a crystalline polylactic acid polymer with a content ratio of L-lactic acid and D-lactic acid of 94:6 to 6:94. On the other hand, the invention of the subject application demonstrates useful effects, including excellent impact resistance, heat resistance, and transparency due to this feature.

## Claim 5

The invention of claim 5 appears to involve an inventive step with respect to document 1 cited in the ISR.

Document 1 does not describe that the hot-molded body is obtained from a polylactic acid polymer sheet for hot molding, which is a sheet using a resin composition composed of a non-crystalline polylactic acid polymer with a content ratio of L-lactic acid and D-lactic acid of 92: 8 to 8 :92 and a crystalline polylactic acid polymer with a content ratio of L-lactic acid and D-lactic acid of 94:6 to 6:94. On the other hand, the invention of the subject application demonstrates useful effects such as excellent impact resistance, heat resistance, and transparency due to this feature.